

AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1 1. **(Currently Amended)** A method of communicating with an element within
2 an enterprise network, comprising:
3 at a first client, encapsulating a first point-to point protocol signal within a network
4 address request header **comprising a Dynamic Host Configuration Protocol DISCOVER**
5 **header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol**
6 **signal comprising a header that includes an identifier of a second client;** and
7 communicating the ~~network address request~~ encapsulated signal toward a tunneling
8 server.

1 2. **(Canceled)**

1 3. **(Currently Amended)** The method of Claim 1, wherein communicating the
2 ~~network address request~~ encapsulated signal toward a tunneling server comprises
3 communicating the signal toward a router configured to relay network address requests to the
4 tunneling server without referencing a routing table indexed by data channel addresses.

1 4. **(Currently Amended)** The method of Claim 3, wherein the ~~first point-to-~~
2 ~~point protocol signal~~ **identifier** comprises a control channel address of ~~a second~~ **the second**
3 client, the control channel address being different from any data channel address recognized
4 by the router.

1 5. **(Currently Amended)** The method of Claim 1, wherein the first point-to-
2 point protocol signal **further** comprises a payload including information to be applied to an
3 application residing at ~~a second~~ **the second** client.

1 6. **(Original)** The method of Claim 5, wherein the application residing at the
2 second client comprises a maintenance application operable to diagnose operational
3 characteristics of the second client.

1 7. **(Currently Amended)** The method of Claim 1, wherein the first point-to-
2 point protocol signal **further** comprises a payload including at least a portion of an
3 application to be installed on ~~a-second~~ **the second** client.

1 8. **(Original)** The method of Claim 1, further comprising encapsulating the first
2 point-to-point protocol signal within a tunneling header prior to encapsulating the first point-
3 to-point protocol signal within the network address request header, the tunneling header
4 operable to facilitate a tunneling session between the first client and the tunneling server.

1 9. **(Original)** The method of Claim 8, wherein the tunneling header comprises a
2 tunneling header selected from the group consisting of a Layer Two Tunneling Protocol
3 (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding
4 (L2F) header.

1 10. **(Currently Amended)** The method of Claim 1, further comprising receiving
2 ~~a-network address response encapsulated~~ **an encapsulated response** signal from the
3 tunneling server, the ~~network address response~~ encapsulated **response** signal comprising a
4 second point-to-point protocol signal responsive to the first point-to-point protocol signal and
5 encapsulated within a network address response header.

1 11. **(Currently Amended)** The method of ~~Claim 1~~ **Claim 10**, wherein the
2 network address response header comprises a Dynamic Host Configuration Protocol OFFER
3 header or a Bootstrap Protocol RESPONSE header.

1 12. **(Currently Amended)** A computer readable medium operable to execute the
2 following steps on a processor of a computer:

3 at a first client, encapsulating a first point-to point protocol signal within a network
4 address request header **comprising a Dynamic Host Configuration Protocol DISCOVER**
5 **header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol**
6 **signal comprising a header that includes an identifier of a second client;** and

7 communicating the ~~network address request~~ encapsulated signal toward a tunneling
8 server.
9

1 13. **(Currently Amended)** The computer readable medium of Claim 12, wherein
2 communicating the ~~network address request~~ encapsulated signal toward a tunneling server
3 comprises communicating the signal toward a router configured to relay network address
4 requests to the tunneling server without referencing a routing table indexed by data channel
5 addresses.
6

1 14. **(Currently Amended)** The computer readable medium of Claim 13, wherein
2 the ~~first point-to-point protocol signal~~ **identifier** comprises a control channel address of ~~a~~
3 ~~second~~ **the second** client, the control channel address being different from any data channel
4 address recognized by the router.
5

1 15. **(Currently Amended)** The computer readable medium of Claim 12, wherein
2 the first point-to-point protocol signal **further** comprises a payload including information to
3 be applied to an application residing at ~~a second~~ **the second** client.
4

1 16. **(Currently Amended)** The computer readable medium of Claim 12, wherein
2 the first point-to-point protocol signal **further** comprises a payload including at least a
3 portion of an application to be installed on ~~a second~~ **the second** client.
4

1 17. **(Original)** The computer readable medium of Claim 12, further comprising
2 encapsulating the first point-to-point protocol signal within a tunneling header prior to
3 encapsulating the first point-to-point protocol signal within the network address request
4 header, the tunneling header operable to facilitate a tunneling session between the first client
5 and the tunneling server.
6

1 18. **(Currently Amended)** The computer readable medium of Claim 12, further
2 comprising receiving ~~a network address response encapsulated~~ an encapsulated response
3 signal from the tunneling server, the ~~network address response~~ encapsulated response
4 signal comprising a second point-to-point protocol signal responsive to the first point-to-point
5 protocol signal and encapsulated within a network address response header.
6

1 19. **(Currently Amended)** A method of tunneling in an enterprise network
2 comprising a plurality of clients coupled to a tunneling server by at least one router, the
3 method comprising:

4 at a first client, generating point-to-point protocol signal;
5 encapsulating the point-to-point protocol signal within a network address request
6 header;

7 communicating the ~~network address request~~ encapsulated ~~tunneling~~ signal toward a
8 tunneling server operable to identify and remove the network address request header, to
9 encapsulate the point-to-point protocol signal within a network address response header, and
10 to communicate the ~~network address response~~ encapsulated response signal toward a
11 second client.

12
1 20. **(Currently Amended)** The method of Claim 19, communicating the
2 ~~network address request~~ encapsulated ~~tunneling~~ signal toward a tunneling server comprises
3 communicating the signal toward a router operable to relay the signal toward the tunneling
4 server without referencing a routing table indexed by data channel addresses.

5
1 21. **(Original)** The method of Claim 20, wherein the point-to-point protocol
2 signal comprises a control channel address of a second client, the control channel address
3 being different from any data channel address recognized by any router coupled to the
4 tunneling server.

5
1 22. **(Original)** The method of Claim 19, further comprising encapsulating the
2 point-to-point protocol signal within a tunneling header prior to encapsulating the point-to-
3 point protocol signal within the network address request header, the tunneling header
4 operable to facilitate a tunneling session between the first client and the tunneling server.

5
1 23. **(Original)** The method of Claim 19, further comprising receiving a response
2 from the second client, the response forwarded from the tunneling server and comprising a
3 point-to-point protocol signal encapsulated within a network address response header.

1 24. **(Currently Amended)** In an enterprise network comprising at least one client
2 coupled to a tunneling server by a router having a routing table indexed by data channel
3 addresses, a first client comprising:

4 a protocol stack operable to generate a first point-to-point protocol signal comprising
5 a header that includes an identifier of a second client; and

6 a tunneling module operable to encapsulate the first point-to-point encapsulated signal
7 within a network address request header comprising a Dynamic Host Configuration
8 Protocol DISCOVER header or a Bootstrap Protocol REQUEST header;

9 wherein the first client is operable to communicate the ~~network address request~~
10 encapsulated signal toward the router for forwarding to the tunneling server without reference
11 to the routing table.

12
1 25. **(Canceled)**

2
1 26. **(Currently Amended)** The first client of Claim 24, wherein the ~~network~~
2 ~~address request~~ encapsulated signal comprises a tunneling header encapsulating the first
3 point-to-point signal, the tunneling header operable to facilitate a tunneling session between
4 the first client and the tunneling server.

5
1 27. **(Original)** The first client of Claim 26, wherein the tunneling header
2 comprises a tunneling header selected from the group consisting of a Layer Two Tunneling
3 Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two
4 Forwarding (L2F) header.

5
1 28. **(Currently Amended)** The first client of Claim 24, wherein the second
2 client is coupled to the tunneling server and the first point-to-point protocol signal further
3 comprises ~~comprises: an identification of a second client coupled to the tunneling~~
4 ~~server; and~~ information to be applied to an application residing at the second client.

1 29. **(Currently Amended)** The first client of Claim 28, wherein the
2 ~~identification~~ identifier of the second client comprises a control channel address of the
3 second client, the control channel address being distinct from any data channel address used
4 to index a routing table accessible to the router.
5

1 30. **(Original)** The first client of Claim 28, wherein information comprises
2 information to be applied to a maintenance application residing at the second client and
3 operable to diagnose operational characteristics of the second client.
4

1 31. **(Currently Amended)** The first client of Claim 24, wherein the tunneling
2 module is operable to receive a point-to-point protocol signal encapsulated within a network
3 address response header, the ~~network address response encapsulated~~ encapsulated
4 response signal having been relayed from the tunneling server through the router without
5 reference to a routing table indexed by data channels.
6

1 32. **(Original)** The first client of Claim 31, wherein the network address response
2 header comprises a DHCP OFFER header or a Bootstrap Protocol RESPONSE header.
3

1 33. **(Currently Amended)** In an enterprise network, a client having an enterprise
2 protocol stack operable to process signals received from a data channel and associated with a
3 data channel address, the client comprising:

4 a tunneling module operable to receive a first point-to-point protocol signal
5 encapsulated within a network address response header and to remove the network address
6 response header to expose the first point-to-point protocol signal, the first point-to-point
7 protocol signal comprising a header that includes an identifier of a client, the network
8 address response header comprising a Dynamic Host Configuration Protocol OFFER
9 header or a Bootstrap Protocol RESPONSE header; and

10 a private protocol stack operable to receive the first point-to-point protocol signal
11 from the tunneling module and to communicate at least a portion of a payload of the first
12 point-to-point protocol signal to a socket layer coupled to an application residing at the client.

1 34. **(Canceled)**

1 35. **(Currently Amended)** The client of Claim 33, wherein the application
2 comprises a maintenance application operable to diagnose operational characteristics of the
3 ~~second~~ client.

1 36. **(Original)** The client of Claim 33, wherein the application comprises an
2 application operable to process the at least a portion of the payload and to generate an output
3 to be communicated toward another network element.

1 37. **(Currently Amended)** The client of Claim 33, wherein:
2 the private protocol stack is operable to generate a second point-to-point protocol
3 signal comprising a header that includes an identifier of a destination network element
4 and a payload carrying at least a portion of the output; and

5 wherein the tunneling module is operable to encapsulate the second point-to-point
6 signal within a network address request header and communicate the network address request
7 encapsulated signal to a router for relaying toward ~~a destination~~ the destination network
8 element without reference to a routing table indexed by data channel addresses.

1 38. **(Original)** The client of Claim 37, wherein the network address request
2 header comprises a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap
3 Protocol REQUEST header.
4

1 39. **(Original)** The client of Claim 33, wherein the first point-to-point protocol
2 signal is encapsulated within a tunneling header and further encapsulated within the network
3 address response header, and wherein the tunneling module is operable to process the
4 tunneling header to maintain a tunneling session between the client and a tunneling server.
5

1 40. **(Original)** The client of Claim 39, wherein the tunneling header comprises a
2 tunneling header selected from the group consisting of a Layer Two Tunneling Protocol
3 (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding
4 (L2F) header.
5

1 41. **(New)** The method of Claim 1, wherein the identifier comprises a host name,
2 IP address, or MAC address of the second client, the host name, IP address, or MAC address
3 being different from any host name, IP address, or MAC address recognized by the router.
4

1 42. **(New)** The computer readable medium of Claim 12, wherein the identifier
2 comprises a host name, IP address, or MAC address of the second client, the host name, IP
3 address, or MAC address being different from any host name, IP address, or MAC address
4 recognized by the router.
5

1 43. **(New)** The first client of Claim 24, wherein the identifier comprises a host
2 name, IP address, or MAC address of the second client, the host name, IP address, or MAC
3 address being different from any host name, IP address, or MAC address recognized by the
4 router.
5

1 44. **(New)** The client of Claim 33, wherein the identifier comprises a control
2 channel address of the client, the control channel address being different from any data
3 channel address recognized by the router.
4

1 45. (New) The client of Claim 33, wherein the identifier comprises a host name,
2 IP address, or MAC address of the client, the host name, IP address, or MAC address being
3 different from any host name, IP address, or MAC address recognized by the router.
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